

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2025
(Third Semester)

Branch - COMPUTER SCIENCE

DATABASE MANAGEMENT SYSTEMS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	operations do not preserve non-matched tuples. a) Left outer join b) Inner join c) Natural join d) Right outer join	K1	CO1
	2	Which forms have a relation that contains information about a single entity? a) 4NF b) 2NF c) 5NF d) 3NF	K2	CO1
2	3	The top level of the hierarchy consists of _____ each of which can contain _____. a) Schemas, Catalogs b) Schemas, Environment c) Environment, Schemas d) Catalogs, Schemas	K1	CO1
	4	_____ indicates the maximum number of entities that can be involved in a relationship. a) Greater Entity Count b) Minimum cardinality c) Maximum cardinality d) ERD	K2	CO1
3	5	The user IDs can be added or removed using which of the following fixed roles? a) db_sysadmin b) db_accessadmin c) db_securityadmin d) db_setupadmin	K3	CO3
	6	Why the following statement is erroneous? SELECT dept_name, ID, avg(salary) FROM instructor GROUP BY dept_name; a) Dept_id should not be used in group by clause b) Group by clause is not valid in this query c) Avg(salary) should not be selected d) None	K3	CO3
4	7	After groups have been established, SQL applies predicates in the _____ clause, allowing aggregate functions to be used. a) Where b) Having c) Group by d) With	K2	CO4
	8	Which of the following is not the utility of DBMS? a) Backup b) Data Loading c) Process Organization d) File organization	K2	CO4
5	9	What does a foreign key combined with a primary key create? a) Network model between the tables that connect them b) Parent-Child relationship between the tables that connects them c) One to many relationship between the tables that connects them d) All of the mentioned	K3	CO5
	10	What is the function of the following command? Delete from r where P; a) Clears entries from relation b) Deletes relation c) Deletes particular tuple from relation d) All of the mentioned	K3	CO5

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Define the structure of relational model in DBMS. (OR)	K2	CO1
	11.b.	Explain the normalization Procedure with an example.		
2	12.a.	Summarize the concepts of joins in DBMS. (OR)	K3	CO1
	12.b.	Classify sub queries in Oracle with suitable examples.		
3	13.a.	Apply the concepts of packages in PL/SQL structure on a simple example. (OR)	K4	CO3
	13.b.	Explain the uses of exception handler with examples.		
4	14.a.	Exponent on the types of No SQL database. (OR)	K4	CO4
	14.b.	Compare the concepts of ACID Vs BASE in NoSQL.		
5	15.a.	Elucidate embedded document concepts in Mongo DB. (OR)	K3	CO4
	15.b.	List the need of cursors in Mongo DB.		

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Illustrate the use of ER model with examples.	K4	CO1
2	17	Apply the concepts of DML with examples.	K4	CO2
3	18	Examine the difference between implicit and explicit cursor in DBMS.	K4	CO3
4	19	Illustrate the techniques of column family databases.	K4	CO4
5	20	Make use of CRUD in Mongo DB and explain with examples.	K4	CO4